



COST Action MP1209  
Materials, Physical and Nanosciences

COST Grant System  
14 April 2016

## Action MP1209 Fact Sheet

### Title

Thermodynamics in the quantum regime

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### Details

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### Objectives

Modern technologies, that now miniaturise to the nanoscale and into the quantum regime, have the potential to revolutionise many upcoming socio-economic challenges. Historically, thermodynamics has been highly successful, enabling the development of technologies that changed our lives, ranging from fridges to jet planes. While these applications involve macroscopic systems, described accurately by the laws of classical physics, little is known about the applicability of standard notions of thermodynamics in the quantum regime. The aim of the Action is to establish and grow the scientific basis that underpins future thermodynamic technologies at the nanoscale. Central for this is the understanding of fundamental thermodynamic processes for small ensembles, particularly in the quantum regime, in- and out-of equilibrium. These are topics of the emerging cross-over field, quantum thermodynamics



Intentions to accept the MoU							
Country	Date		Country	Date		Country	Date

Working Groups
None

<http://www.qut.ethz.ch>

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